SHISHKOVSKAYA, M. A.

**USSR**/Chemistry - Chemical technology

**Card** 1/1    **:** Pub. 22 - 21/41

**Authors**    **:** Logginov, G. I.; Lyubimova, T. Yu.; and Shishkovskaya, M. A.

**Title**    **:** Use of radioactive isotopes for study of changes in the structure of cement stone during its periodic freezing

**Periodical**    **:** Dok. AN SSSR 98/2, 247-250, Sep 11, 1954

**Abstract**    **:** The use of the radioactive isotope method for the study of the causes, mechanisms and kinetics of changes in the structure of cement stone in concrete under the effect of periodic freezing and thawing is described. It is hoped that this new method will make it possible to approach a solution for one of the basic problems, namely, the manufacture of long-lasting concrete with high-freezing resistance. Tables; graphs.

**Institution** **:** Acade. of Sc. USSR, Institute of Physical Chemistry and the All-Union Road Construction Scientific-Research Institute

**Presented by :** Academician P. A. Rebinder, June 4, 1954

TOMAN, M.; SHISL', O.

Rhythmical precipitation of isomeric phenols. Koll. zhur. 27
no.6:888-890 N-D '65.                          (MIRA 18:12)

1. Institut agrokhimicheskoy tekhnologii, Bratislava, Chekho-
slovakiya. Submitted Feb. 21, 1965.

SHISHLAKOV, M.I. [Shyshlakov, M.I.], inzh.-stroitel'

Experience in constructing and operating a circular milking barn. Mekh.
sil'. hosp. 13 no.8:15-18 Ag '62.                    (MIRA 15:7)

1. Kolkhoz im. XIX s"yezda kommunisticheskoy partii, Velikolipetskiy
rayon, Kharsonskaya obl.
                    (Dairy barns)

SHISHLAKOV, P.G.

Forging chamfers. Kuz.-shtam.proizv. 1  no.5:43-44  My  '59.
(MIRA 12:10)

(Forging)

SHISHLAKOV, P.G.

Zonal heating of blanks for forging following predetermined lines.
Kuz.-shtam. proizv. 2 no.10:35-37 0 '60.          (MIRA 13:10)
                (Forging--Equipment and supplies)

85128
S/182/60/000/005/005/006
A161/A029

1.1200     also 1506,1045

AUTHOR:     Snishlakov, P.G.

TITLE:     Bending Conical Parts in a Vertical Die

PERIODICAL:  Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 5, pp. 45 - 46

TEXT:     This new vertical bending die is designed for producing truncated
cones from steel sheet blanks.  It replaces the usual bending method for such
parts on horizontal bulldozer-presses.  The disadvantages of this method are:
two dies and two presses are needed for preliminary and final bending;  the ne-
cessity of heating after preliminary bending;  manual straightening of work after
final bending is necessary, i.e., finishing the edges and rounding on a special
mandrel, straightening of the hot cones taking the longest time of all operations
in the process;  the manufacture of accurate cones is not ensured due to possible
displacement of the pressure center from the gravity center.  In the new die trun-
cated cones are shaped without preliminary bending, with a single heating and a
single press run and manual finishing is completely eliminated.  The heated blank
is put in a definite position on the die top (Fig. 2a) and the pressure force of

Card 1/4

SHISHLAKOV, P.G.

Stamping of thin-walled profiled rings. Mashinostroitel' no.8:31-32
Ag '60.                                                    (MIRA 13:9)
                    (Sheet-metal work)

S/182/60/000/010/013/015/XX
A161/A030

AUTHOR:       Shishlakov, P.G.

TITLE:        Spot Heating of Stamping Blanks by Given Epures

PERIODICAL:   Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 10, pp. 35 - 37

TEXT:         Heating the necessary spots on forging blanks instead of the entire blanks is economical and particularly convenient in forging shops which have electric heating equipment.  Several examples of spot heating are described.  In order to bend cramps (Fig. 1) the bar can be heated in two spots to 1,000°C.  For cutting rectangular blanks automatically in a blanking press (Fig. 2) the strip is fed by an automatic feed mechanism to the cutting die and passes between two single-loop induction heaters.  A relay switches on the heaters at the moment when the punch starts the downward stroke, and off when the punch rises after cutting.  The feed mechanism switches on at the moment when the heaters switch off and the heated spots on the strip are under the punch.  The heating epure for rectangular blanks is a rectangle (Fig. 3).  The Ivanovskiy mashinostroitel'nyy zavod (probably Ivanovo Machine Plant) uses contact-heaters 2H3-15 (2N3-15) of the "Elektrik" Plant for spot heating of billets for cylindrical-head pins (Fig. 4a);  the billet is laid at an incline between the contacts (Fig. 5) and the

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Spot Heating of Stamping Blanks by Given Epures

S/182/60/000/010/013/015/XX
A161/A030

length of the heated piece can be changed by changing the incline angle and the position of the point A. No clamping is necessary for the top contact holds down the billet, and electric current through the points A and A1 heats the required billet length. The Klimovskiy (probably Klimovo) Machine Plant uses electric contact heaters of an other design (Fig. 7) for heading bolts with ball head and square underhead (Fig. 6). Maximum temperature is needed at the spot where the head with sharp edge passes over into the square underhead (Fig. 6, epure), and the rod must remain cold for easy ejecting and retaining the smooth work-hardened surface, which is important for subsequent threading. Current through the upper contact of the heater (Fig. 7) splits, and higher temperature in the A - B portion of the billet is obtained because of its shorter length than B - A portion, and lower resistance. A dieelectric lining (4) is used in the bottom contact to prevent bending of the billet. The electrodes are cooled with running water. The tension needed is up to 3 v; the heating time is 9 - 12 sec. The last spot-heating example is for bending leaf springs with simultaneous chamfering (Fig. 8), by hot gas in an especially built small flame furnace (Fig. 9). The springs are parts of an automatic loom. There are 9 figures.

Card 2/6

SHISHLAKOV, P.G.

New method for manufacturing "ShEZ."  Mashinostroitel' no.12:30
D '60.                                                    (MIRA 13:12)
                    (Sheet-metal work)

SHISHLAKOV, P.G.

Bending with restriking. Kuz.shtam. proizv. 3 no.1:12-13 Ja '61.
(MIRA 14:1)

1 (Forging)

S/117/61/000/006/006/012
A004/A104

AUTHOR:      Shishlakov, P. G.

TITLE:       The advantages of twin die-forging

PERIODICAL:  Mashinostroitel', no. 6, 1961, 22-23

TEXT:        The author enumerates the advantages of the simultaneous die-forging
of two or more parts and points out that with this method the labor productivity
is at least doubled. He divides the twin die-forging method into three groups:
1) combining the components in series or in parallel; 2) concentric joining of
components; 3) butt-joining of components. With the first operation modus the
components are placed at a certain distance from each other, their geometric
axes are either turned or not. This method is used in big-lot and mass production,
e.g. at the automobile plants where four wing nuts, door handles, hand brake shoes
and other parts are die-forged simultaneously. The concentric joining of
components for simultaneous die-forging requires an outer component with a
circular or square aperture into which the second component or a number of small
components are placed. At the "Krasnyy proletariy" Plant this method is used
for the die-forging of lathe parts. With this method the necessary forging

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The advantages of twin die-forging

impact for the parts located on the inside of the outer part is obtained on account of the energy which during separate die-forging is consumed for the extrusion of the inner flash.  The die-forging of two butt-joined parts is mainly used for long components possessing a local deformation.  Thus the Klimovskiy mashinostroitel'nyy zavod (Klimovo Mechanical Engineering Plant) uses the twin die-forging method for the fabrication of flat springs (Fig. 1) whose $45^o$ face end chamfer was formerly machined by milling.
Figure 2:
1.  Continuous heating of the center part of the twin blank,  a)  heating spot;
2.  Forging of tangs in the 1st plane, a)  and b)  elongation;  3)  Forging of tangs in the 2nd plane, a) and b)  elongation;  4.  Cutting off,  a)  knives.
The new method, in comparison with the old one, increased the labor productivity by a factor of 10.  Based on this method of twin die-forging the author has developed an automated process of die-forging the shanks of fitter's files, which makes it possible not only to cut down considerably the losses of tool steel  - which amounted to 40 grams for every file - but to fully automate the production process.  The author presents a technological layout of the new automated process which consists in the fact that the center part of the twin blank is heated to the necessary temperature with subsequent simultaneous die-forging of two shanks in

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S/ ┘┘┘, ┘┘, ┘┘┘, ┘┘┘/008/012
A004/A104

The advantages of twin die-forging

two planes and separating of the two files. The author gives a short description of the automated production process. There are 3 figures.

Figure 2:

1. Непрерывный нагрев середины сдвоенной заготовки

Место нагрева a)

2. Ковка хвостовиков в 1-й плоскости

a) Удлинение ——    $P_1$    —— Удлинение b)

3. Ковка хвостовиков во 2-й плоскости

ч) Удлинение ——    $P_2$    —— Удлинение b)  ✓

4. Разрубка

$P_3$  Ножи ч)

$l$        $l$

Card 3/3

S/028/62/000/004/002/004
D262/D301

AUTHOR:        Shishlakov, P.G.

TITLE:         New steels for drop forging

PERIODICAL:    Standartizatsiya, no. 4, 1962, 28 - 32

TEXT:          Some new chromium-manganese and chromium-tungsten
steels for forging die making are reviewed. It is stated that of
the 20 existing makes of steel included in ГОСТ 7831-55 (GOST 7831-
-55) 25 % contain nickel, 5 ХНВ (5KhNV) and 5 ХНТ (5KhNT) being
most widely used, but they are not considered as being fully satis-
factory. The experiments, conducted by several institutes and steel
mills, with different makes of steel in order to increase the useful
life of drop forging stamps (impact strength, hardness, heat resis-
tance, etc.) are discussed. The results of the experiments are pre-
sented in the form of graphs and tables and the following conclu-
sions reached:  Almost all stamps for drop forgings can be made of
chromium-manganese and chromium-tungsten steels and they will give

Card 1/2

SHISHLAKOV, P.G.

Forging of crankshafts for looms. Kuz.-shtam. proizv. 3 no.11: (MIRA 14:11)
9-12 N '61.

(Forging)  (Cranks and crankshafts)

SHISHLAKOV, P.G.

New steels for drop-forging dies.  Standartizatsiia  26  no.4:
28-32  Ap  '62.                                    (MIRA 15:3)
              (Dies (Metalworking))  (Steel--Standards)

S/182/62/000/009/001/004
D040/D113

AUTHOR:        Shishlakov, P.G.

TITLE:         New die steels for hot stamping

PERIODICAL:    Kuznechno-shtampovochnoye proizvodstvo, no. 9, 1962, 6-10

TEXT:          Over 30 new die steels are recommended by VNIINMASh. The
recommendations are based on the results of investigations conducted at the
Moskovskiy institut stali (Moscow Steel Institute), the TsNII chernoy metal-
lurgii (TsNII of Ferrous Metallurgy) and other institutes and plants. The
major trend in Soviet research is to replace nickel steels by Cr-Mn and Cr-
-W grades; die steels per ГОСТ 7831-55 (GOST 7831-55) do not satisfy in-
creasing demands regarding the service life of hot stamping dies and the
accuracy of obtained forgings. The chemical composition of the ЭИ 955
(EI955), ЭИ 956 (EI956), ЭИ 958 (EI958), ЭИ 959 (EI959), ЭП 1 (EP1), ЭП 2
(EP2), 4Х3ВМФ(4Kh3VMF), 4Х6С3МФ(4Kh6SVMF), 5Х4СВ4МФ(5Kh4SV4MF), 5ХГСВФ
(5KhGSVF), and 5ХГС(5KhGS) new steel grades is given. The dies and die
parts, for which each of the 30 odd new steel grades is suitable, are
listed. Conclusions: (1) Almost all hot stamping dies can be made from

Card 1/2

SHISHLAKOV, P.G.

Scientific analysis method is a basis for the standardization of technological equipment. Standartizatsiia 27 no.4:23-27 Ap '63.

(MIRA 16:4)

(Industrial equipment—Standards)

SHCHILAKOV, P.G.

Standardizing steel sections by stages. Standartizatsiia 29 no.1:
20-22  Ja '65.                                         (MIRA 18:4)

EWP(m)/EWP(j)/EWP(t)/ETI/EWP(k)    IJP(c)    JD/HW/DJ/RM

SOURCE CODE: UR/0182/66/000/008/0023/0026

ACC NR: AP6029858    (A)

AUTHOR: Shishlakov, P. G.

ORG: none

TITLE: Precision forging of the sleeves of sliding bearings

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 8, 1966, 23-26

TOPIC TAGS: dry bearing, metal forging, bearing material, plastic coating

ABSTRACT: A flowsheet for the precision forging of these sleeves is described. (Fig. 1). By this method it is possible to fit the sleeve to the shaft and bearing without resorting to any machining operations that might damage the fluoroplastic coating. Precision sizing of the inside and outside diameters of the sleeves can be accomplished with the aid of a set of dies whose dimensions are calculated to assure the required gap between the shaft and the walls of the bearing and to reduce the bending-induced stresses in the sleeve. The overall thickness of the sleeve wall is calculated as a function of the maximum bending radius of the laminated tape (e.g. steel base coated with fluoroplastic) at which the integrity of the plastic coating still remains preserved. To reduce the bending-induced stresses in the sleeve, and

UDC: 621.983

Card 1/2

ACC NR:   AP6033755

SOURCE CODE:   UR/0117/66/000/010/0029/0030

AUTHOR: Shishlakov, P. G.

ORG: none

TITLE: Dry friction slider bearings

SOURCE: Mashinostroitel', no. 10, 1966, 29-30

TOPIC TAGS: slide bearing, dry friction, bearing design, bearing performance, bearing material, plastic metal band COMPOSITE MATERIAL

ABSTRACT: The design and performance of dry friction slider-type bearings are described in some detail. The most important part of the bearings is an insert or bushing made of a metal-plastic composite band. The rubbing layer is made of floroplast [an unspecified fluorocarbon] which has low thermal conductivity. To permit sufficient heat transfer, the thickness of this layer should not exceed 0.05 mm. The second layer, 0.3 mm in thickness, is of bronze granules having high thermal conductivity; bronze adheres readily to the floroplast. The third layer (base) is of soft cold-rolled steel. The bronze layer is fused to the 1—2 mm thick base. In addition to heat transfer, an important factor which insures reliable performance of the bearings is the intactness of the plastic layer; therefore, any machining of the rubbing surface is absolutely precluded, and bearings with plastic-metal composite bands are produced only by precision forming. The plastic rubbing surface is self healing: if its continuity is disrupted and the bronze exposed, the plastic will be

Card  1/2

UDC:  621.822.5
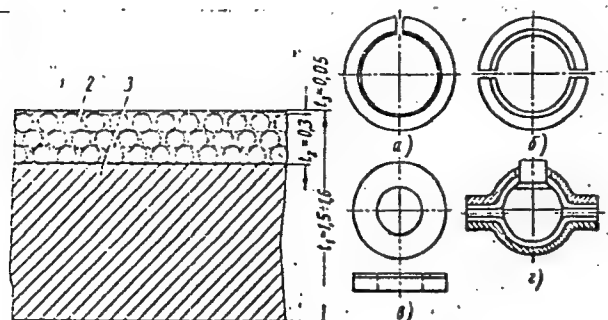
ACC NR:    AP6033755



Fig. 1.   Cross section of the multi-layer antifriction metal-plastic composite band

1 - Floroplast layer; 2 - heat transfer layer (bronze granules); 3 - steel base.

squeezed out from the bronze pores to restore the rubbing layer.  However, such healing is limited by the amount of plastic in the bronze pores.  Orig. art. has: 3 figures.

SUB CODE:    13/    SUBM DATE:  none/

Card   2/2

SILIN, A. M.

Dissertation: "Stabilisation and Astabilization of Hydrophobic Salts (Interaction of Salts of Arsenic Trisulfide with Gelatin)." Cand Chem Sci, Moscow State Pedagogical Inst imeni V. I. Lenin, 7 Jun 54. Vechernyaya Moskva, Moscow, 27 May 54.

SO: SUM 284, 16 Nov 1954

SHISHLO, K. S.

   "Ways of Increasing the Production of Cotton-Printing Machines."  Sub 31 May 51.
Moscow Textile Inst

   Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 5:

SHISHLO,K.S., kandidat tekhnicheskikh nauk

Electric drive of a new printing machine.  Tekst.prom.15 no.10:48-
49 O'55.                                    (MIRA 9:12)
        (Textile printing) (Electric machinery)

8(5)                                                    SOV/112-59-3-5058

Translation from:  Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 107 (USSR)

AUTHOR:  Myl'nikov, N. N., Bakharevskiy, V. P., and Shishlo, K. S.

TITLE:  Electrical Drive on New Cotton Printing Machines
        (Elektroprivod novykh pechatnykh mashin)

PERIODICAL:  Izv. vyssh. uchebn. zavedeniy. Tekhnol. tekstil'n. prom-sti,
        1958, Nr 1, pp 157-168

ABSTRACT:  Two types of the electrical drive on cotton-printing machines used at
        the Ivanovo textile finishing plants are compared:  (1) a drive with a 3-phase
        doubly-fed commutator motor with a regulating transformer (Czechoslovak
        make, 1955); (2) a generator-motor-scheme drive with a DC motor (made by
        the Shcherbakov Plant of Polygraphic Machines).  The full range 1:11 of speed
        regulation is attained in the first type by means of an additional adjustable-
        speed reducer.  A comparison shows that the generator-motor-type drive has
        the advantages over the 3-phase commutator-motor drive in controllability,


Card 1/2

8(5)                                                SOV/112-59-3-5058

Electrical Drive on New Cotton Printing Machines

   higher speed, and lower electric-energy consumption per unit production.  It
   is noted that the generator-motor scheme can be simplified for the operating
   duty in question.  Both schemes and energy characteristics of the drives are
   presented.

                                                            L. Ya. L.

Card 2/2

SHISHLO, K.S.

Current status of automatized electric drive in the textile
industry and the outlook for its expansion in the immediate
future.  Izv.vys.ucheb.zav.; tekh.tekst.prom.   no.1:152-155
'60.                                              (MIRA 13:6)

1. Ivanovskiy tekstil'nyy institut.
         (Textile machinery--Electric driving)

SHISHLO, K.S.

Expanding the range of speed regulation in a.c. commutator motors.
Izv. vys. ucheb. zav.; tekh. teks. prom. no. 2:120-123 '61.
(MIRA 14:5)

1. Ivanovskiy tekstil'nyy institut imeni M.V. Frunze.
(Electric motors, Alternating current)

SHISHLO, K.S.; VOLKOV, A.V.

> Driving devices of roving machines. Izv. vys. ucheb. zav.;
> tekh. tekst. prom. no.4:126-130 '63.          (MIRA 16:11)
>
> 1. Ivanovskiy tekstil'nyy institut imeni M.V. Frunze.

L 38104-66    EWT(1)    DD

ACC NR: AP6021226    (N)    SOURCE CODE:   UR/0396/66/010/003/0065/0066

AUTHOR: Shishlo, M. A.; Shimkevich, L. L.

ORG:  Chair of Physics and Chair of Histology, First Moscow Order of Lenin and Order of the Red Banner of Labor Medical Institute im. I. M. Sechenov (Kafedra fiziki i kafedra gistologii I Moskovskogo ordena Lenina i ordena Trudovogo Krasnogo Znameni meditsinskogo instituta)

TITLE:  The effect of exposure of the intact organism to a constant magnetic field on the activity of oxidative enzymes in the livers of mice

SOURCE: Patologicheskaya fiziologiya i eksperimental'naya terapiya, v. 10, no. 3, 1966, 65-66

TOPIC TAGS:  magnetic biologic effect, fermentation, oxidative degradation, enzyme

ABSTRACT:      Five    enzymes:      succinate dehydrogenase (SDH), malate dehydroge-
nase (MDH), glutamate dehydrogenase (GDH), lactate dehydrogenase (LDH) and glucose-6-
-phosphate dehydrogenase (G-6-DH) were studied after 24 and 72 hr  exposure to a mag-
netic field  (4500 oe with a gradient of 500 oe/cm). Significant  changes  were noted
in   the activity of SHD, MDH and GDH manifested by the diffuse reaction of the cyto-
plasm and the size and number of granules, greater  than in the controls.  The enzy-
matic activity of LDH and G-6-DH did not change appreciably. The author concludes that

UDC:  612.351.11.014.426

Card 1/2

L 38106-66

ACC NR: AP6021226                                                              ⊘

the magnetic field primarily affects enzyme activity within the mitochondria and specu-
lates that this is due to the alteration of the permeability of the mitochondrial mem-
brane. He further correlates his findings with the observed increase in the phospho-
rylation coefficient in homogenates of guinea pig liver cells after exposure to a con-
stant magnetic field.                                                      [14]

SUB CODE: 06/    SUBM DATE: 11Oct65/    ORIG REF: 003/    OTH REF: 004/
ATD PRESS: 5046

Card 2/2 MLP

SHISHLOV, A.D.

Preparation of collapsible metal molds for casting plates from epoxy resins. Zav. lab. 31 no.11:1401 '65.

(MIRA 19:1)

1. Gor'kovskiy politekhnicheskiy institut.

L 31058-66    E.P(j)/EWT(m)/T    IJP(c)    RM/DJ/WE

ACC NR:  AP5027471                           SOURCE CODE:   UR/0032/65/031/011/1401/1401

AUTHOR:  Shishlov, A. D.

ORG:  Gorki Polytechnical Institute (Gor'kovskiy politekhnicheskiy institut)

TITLE:  Preparation of metallic disassembling molds for casting epoxy plastic plates

SOURCE:  Zavodskaya laboratoriya, v. 31, no. 11, 1965, 1401

TOPIC TAGS:  metal coating, rubber, epoxy plastic, aviation gasoline, PLASTIC FABRICATING MACHINERY, PLASTIC COATING

ABSTRACT:  A 15% solution of silicon-organic caoutchouc SKT in Kalosha gasoline, recommended as an adhesion-preventing coating for metallic disassembling molds, cannot always be used because Kalosha gasoline is often unavailable. It was proven that this gasoline can be replaced by using a 5-6% solution of SKT caoutchouc in aviation gasoline B-70 which is usually available. A higher than 5-6% solution causes beading of the caoutchouc on the mold surface and subsequently on the epoxy plastic plates. The preparation of the mold is simple. Carefully cleaned and degreased mold parts are splashed at room temperature in the solution and dried for 2-4 hr at 80-90C in a drying oven. The gasoline should be pure because admixtures of heavier fractions do not evaporate entirely during drying, and diffusion of vapors into the resin makes the plates opaque and unapplicable. Cleaning the molds after production of resin plates is done by heating the molds at 50-60C in the drying oven, where the molds are rubbed by

Card  1/2                                            UDC:  620.170

L 34358-66

ACC NR: AP5027471                                                          ⌀

acetone which removes most of the caoutchouc. The remainder is removed by a school eraser containing no glass. The cleaning does not worsen the surface of the mold and even improves it.

SUB CODE://, 13/   SUBM DATE:  none

Card  2/2

DEMIN, G.I.; PLUZHNIKOV, A.I.; CHURAKOV, A.M., inzh.; ZHILIN, I.S., inzh.;
       MAKAROV, D.M., inzh.; LEBEDEV, N.D., inzh.; SHISHLOV, D.D., inzh.;
       IGLIN, V.P., inzh.; YEVLAYEV, E.S., laborant; KISELEV, V.V.,
       laborant; KOTEL'NIKOV, V.V., laborant; TYULENEVA, N.I., laborant

       Transfer of a holding furnace to heating by natural gas with
       self-carburation. Stal' 23 no.8:755-758 Ag '63.     (MIRA 16:9)

       1. Moskovskiy institut stali i splavov (for Demin, Pluzhnikov).
                              (Furnaces, Heating)

SHISHLOV, G., inzh.

Atomizer with a hydraulically locked doubly differential
needle.  Mor. flot 20 no. 12:27-29 D '60.          (MIRA 13:12)

1. Kaliningradskoye otdeleniye laboratorii dvigateley
AN SSSR.
                   (Marine diesel engines)

SHISHLOV, G.A.; PRIVEZENTSEV, G.P.

Increasing the size of card sliver packages. Tekst.
prom. 20  no.5:57-59  My  '60.          (MIRA 13:8)

1. Nachal'nik chesal'nogo tsekha pervoy fabriki kombinata
"Krasnyy Perekop" (for Shishlov). 2. Zaveduyushchiy tsentral'-
noy laboratoriyey kombinata "Krasnyy Perekop" (for
Privezentsev).
                    (Carding)

SHISHLOV, G.A.; PRIVEZENTSEV, G.P.

Modernization of obsolete carding machines. Tekst. prom. 20
no. 11:61-63 N '60.                                      (MIRA 13:12)

1. Nachal'nik chesal'nogo tsekha fabriki No. 1 kombinata
"Krasnyy Perekop" (for Shishlov).
                    (Carding machines)

SHISHLOV  N.D.

Organizations of the Ministry of Construction participate in
Soviet exhibitions abroad.  Mont. i spets. rab. v stroi.  24 no.3:
28-29  Mr  '62                                    (MIRA 15:6)

1.  Gosudarstvennyy institut po vnedreniyu peredovykh metodov
rabot i truda v stroitel'stve Ministerstva stroitel'stva SSSR.
              (Building--Exhibitions)

SHISHLOV, V.

The first Soviet production line. Mest.prom.i khud.promys. 3
no.4:13  Ap  '62.                                (MIRA 15:5)

1. Glavnyy inzh. Kashirskoy makaronnoy fabriki "Udarnitsa", Kashir,
Moskovskoy oblasti.
     (Kashira—Macaroni)  (Assembly-line methods)

Two Evening

Permissible quantity of meat in rations of fur-bearing animals.  Zver. i zver., 5, No. 1,
19 .

Monthly List of Russian Accessions, Library of Congress, June 195 .  UNCLASSIFIED.

NADGERIYEV, M.K., dotsent; KOCHEGAROV, A.A., kand.med.nauk; SHISHLOV, V.I.

Problems in the diagnosis and treatment of suppurative diseases
of the lungs. Sov.med. 28 no.12:14-18 D '65.

(MIRA 18:12)

1. Klinika obshchey khirurgii (zav. - dotsent M.K.Nadgeriyev) i
klinika gospital'noy terapii (zav. - dotsent S.G.Salimov) Blago-
veshchenskogo meditsinskogo instituta.

SHISHLOVA, G.N.; MOTINA, Ye.I., lingvist, red.; LEBEDEVA, N.B., geolog., red.; DEM'YANOVA, L.G., red.; BUNINA, Ye.D., red.; LAZAREVA, L.V., tekhn. red.

[Book for reading on geology; a textbook for foreign students studying the Russian language] Kniga dlia chteniia po geologii; uchebnoe posobie dlia studentov-inostrantsev, izuchaiushchikh russkii iazyk. Red.-lingvist E.I.Motina, Red.-geolog N.B.Lebedeva. Moskva, Izd-vo Mosk.univ., 1961. 139 p. (MIRA 14:11)

(Geology)

LUR'YE, Ye.I.; SHISHLOVA, L.G.

Industrial flow-system for the continuous rectification of synthetic aliphatic alcohols. Trudy VNIINeftekhim no.1:66-83 '60.

(MIRA 14:1)

1. Lengiprogaz.
   (Alcohols)                (Distillation, Fractional)

SHISHIKOVA, N.A.

Corn Bacterial leaf spot of corn and the possibility of using
antibiotics for its control. Trudy Vses. inst. sel'khoz. mikrobiol.
17:87-99 '60.                                                (MIRA 15:3)
    (Corn (Maize)--Diseases and pests) (Antibiotics)

KUPERMAN, P.I.; GRYAZNOV, N.S.; MOCHALOV, V.V.; FROLOV, V.V.; MUSTAFIN, F.A.;
PUSHKASH, I.I.; SLAVGORODSKIY, M.V.; LAZAREV, B.L.; BORISOV, V.I.;
Prinimali uchastiye: CHERKASOV, N.Kh.; ZABRODSKIY, M.P.; RYTCHENKO,
A.I.; RUTKOVSKAYA, Ye.N.; SAITBURGANOVA, N.I.; SHTAGER, A.A.;
SHISHLOVA, T.I.; BUDOL', Z.P.; MEN'SHIKOVA, R.I.; GORELOV, L.A.;
AGARKOVA, M.M.; KOUROV, V.Ya.; KOGAN, I.A.; BEZDVERNYY, G.N.;
POKROVSKIY, B.I.

Effect of the lengthening of the coking time on the coke quality and
testing of coke in the blast furnace process. Koks i khim. no.9:
23-28 '63.                                                (MIRA 16:9)

1. Vostochnyy uglekhimicheskiy institut (for Kuperman, Gryaznov,
Mochalov, Kogan, Bezdvernyy, Pokrovskiy). 2. Ural'skiy institut
chernykh metallov (for Frolov). 3. Nizhne-Tagil'skiy
metallurgicheskiy kombinat (for Mustafin, Pushkash, Slavgorodskiy,
Lazarev, Cherkasov, Zabrodskiy, Rytchenko, Rutkovskaya,
Saitburganova, Shtager, Shishlova, Budol', Men'shikova).
4. Koksokhimstantsiya (for Borisov, Gorelov, Agarkova, Kourov).
                              (Coke—Testing)

SHISHLOVSKAYA, K. Ya.

"Functional Changes in the Higher Divisions of the Central Nervous System and the Dynamics of the Blood Sugar Level."  Cand Med Sci, Gor'kiy State Medical Inst, Gor'kiy, 1953.  (RZhBiol, No 3, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO:  Sum. No. 481, 5 May 55

SHISHLOVSKAYA, K.Ya.

Effects of the highest spgment of the central nervous system on the blood sugar level. Zhur.vys.nerv.deiat. 6 no.2:304-311 Mr-Ap '56.

(MLRA 9:8)

1. Kafedra fiziologii Gor'kovskogo meditsinskogo instituta im. S.M.Kirova.

    (BLOOD SUGAR
        eff. of conditioned reflex in dogs)
    (REFLEX, CONDITIONED
        eff. on blood sugar level in dogs)

SHISHLOVSKAYA, K.Ya. (Moskva)

Study of the forced vital capacity of the lungs in silicosis.  Gig.
truda i prof. zab. 4 no.4:23-28 Ap '60.              (MIRA 15:4)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR.
        (LUNGS—DUST DISEASES)       (RESPIRATION)

The laws of the extinction of the phosphorescence of color solutions. A. N. Shishkovskii and S. I. Vavilov. *Phys. Z. Sowjetunion* 3, 329 (1933). A phosphoroscope for the measurement of extinction times of 0.01 to 2 sec. is described, and expts. are reported on the laws of extinction of rhoduline orange N in very viscous sugar solns. The extinction follows the exponential law $J = J_0 e^{-at}$ where $a$ varies with the temp., concn. and viscosity of the soln. while $J_0$ remains const. These results and those of related expts. are interpreted from the point of view of a theory of collisions of the 2nd kind in liquids.

Morris Muskat

A comparison of absorption and fluorescence spectra of anthracene in different states of aggregation. V. A. Shishlovskii. *Compt. rend. acad. sci. U. R. S. S.* 15, 29, 33 (1937) (in English). The absorption and fluorescence spectra of anthracene vapor are similar to those found by previous workers for benzene solns. of anthracene and for cryst. anthracene. Wave-length max. for the vapor are shifted slightly toward shorter wave lengths. The relative intensity of the absorption bands of the vapor differs from that reported for solns. of anthracene. The bands in the fluorescence spectrum of the vapor are more blurred than they are in spectra of solns. Conclusions. The substitution of short-wave for long-wave excitation causes the spectra to lose their characteristic 4-line structure and merge into a continuous spectrum. The spectrum of alc. solns. of anthracene preserves its shape and relative intensity of bands. The spectrum of cryst. anthracene behaves in the same way as that of solns.

H. B. van Valkenburgh

**693. Luminiscent-Photographic Measurement of Ultra-Violet Energy Distribution. L. N. Ananjeva and A. A. Shishlovsky.** *Comptes Rendus (Doklady) de l'Acad. des Sciences, U.S.S.R.* 17, 4, pp. 183-187, 1937. *In English.*—The authors describe a method which uses the visible fluorescence of certain solutions for the observation of the intensity distribution of the incident u.v. light. The intensity of the fluorescent light is measured and a formula is given which connects this intensity with the relative energy distribution of the u.v. spectrum. The authors discuss the various conditions which the fluorescent solution has to fulfil in order to give satisfactory results. It is found that a thin film of sodium salicylate and gelatin on a quartz-plate satisfies these conditions. A recipe is given for the preparation of the solution. For the actual observation the film is brought into contact with an ordinary photographic plate. The fluorescence spectrum of sodium salicylate lies in the blue with a maximum at 4500 Å. This method is applicable to the region 2000-3600 Å. The authors have measured the energy distribution of the continuous $H_2$

spectrum and find satisfactory agreement with previous experimental results.

Methods and devices for luminoscopic examination and classification of substances. A. Shishlovskii. *Zavod. skaya Lab.* 7, 1160 71(1938). A discussion. C. B.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

**2115. Photoluminescence of electrolytic solutions. Part I.** B.
GORDON AND A. SHISHILOVSKY. *Mém. Phys. Ukrainian S.S.R.*, **8**, 1,
pp. 91–96, 1939. *In Ukrainian.*—Experiments on salts of $Tl^+$ $Pb^{++}$ $UO_2^{++}$
and $Cu^{++}$ in water and alcohol solutions show that where the formation of
a complex should be expected, corresponding to formation of a protective
layer round the cation, the solution is usually photoluminescent.     D. S.

C 4

**Spectrophotometry of [light of] low intensity.** A. A. Shishlovskii: *Phys. Trans. Ukrain. Acad. Sci.* 9, 19 27 (1940). –A new spectrophotometer which utilizes 40% of the light energy as compared with 6% in the Koenig-Martens app. is described.　　　　　B. C. P. A.

Physics Inst; Leningrad State U.
Optical Lab, Physics Inst, Ukr·AS

METALLURGICAL LITERATURE CLASSIFICATION

CA

**Photoluminescence of solutions of thallium salts.** B. E. Gordon and A. A. Shishlovskii. *Acta Physicochim. U. R. S. S.* 13, 247-64(1940)(in German); cf. Hilsch, C. A. 32, 50². — Using water free of the "blue fluorescence" G. and L. detd. spectrographically the fluorescence spectra of solns. of a large no. of pure Tl + Pb, Sn and In salts as well as of mixts. of Tl and K in their mixts. with K and Li halides. The exptl. data are shown in 14 figs. and 1 table. All these salts show intense fluorescence the max. of which at about 410 mμ is practically independent of the anion and of the concn. used up to 10⁻³ molar. The intensity of luminescence attains a max. at $15 \times 10^{-4}$ mols./l. TlCl, shifted to $6 \times 10^{-4}$ by addn. of $1 \times 10^{-3}$ mols. KCl. For $ClO_4^-$, $AcO^-$ and $SO_4^{--}$ the fluorescence is violet, addn. of alkali or alk. earth ions has no effect, Cl ions produce a blue fluorescence, the max. lie at 437 and 450 mμ, the increased intensity is a linear function of the Tl-ion concn. and of a fractional exponent of the Cl-ion concn. Addn. of Br ions in up to 10⁻³ molar concns. quenches fluorescence, more Br ions then produce a green fluorescence, $\lambda = 495$ mμ; the concn.-intensity relations indicate that the bearer of the luminescence is the $TlBr_3^-$ ion. Addn. of I ions quenches fluorescence, which does not reappear at higher concns., OH and $Fe^{++}$ ions also act as quenchers; in low concns. they produce no effect on the shape of the absorption spectrum. On the assumption that quenching is due to collisions of the 2nd kind according to Vavilov, the $b \tau \times 10^4$ values are approx. I, 3.0; Br, 0.25; OH, 0.45; $Fe^{II}$, 0.2. G. and Sh. conclude that the emission center is the hydrated Tl⁺ ion. Ions whose polarization is less than that of water produce no effect. Ions with a greater polarization cause quenching. The life of the excited state of $Tl^+(H_2O)_n$ and $TlBr_3^-$ is about 10⁻⁸ sec. In the case of Cl, the complex formed contains more Cl ions the greater their concn., and the life of the complexes increases accordingly.
F. H. Rathmann

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

GORDON, B. YE.; SHISHLOVSKIY, A. A.

Kiev

Optical laboratory, Inst. of Physics of the Academy of Sciences Ukrainian  SSSR, (-1940-).

"The Photoluminescence of Solutions of Thallium Salts."

SA

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J

PROCESSES AND PROPERTIES INDEX

535.370                                                                 2017
Comparative study of photoluminescence in liquid
and solid solutions of thallium salts, KONONENKO,
I. I., AND SHISHLOVSKY, A. A.   C.R. Acad.
Sci. URSS, 35, 6, pp. 163–166, 1942.—Describes
spectral investigations of aqueous solutions of the
haloids and sulphate of Tl, particularly to observe the
effect of concentration of foreign ions in the solution.
The data obtained were compared with available
spectral data for crystalline Tl luminophores. The
principal conclusion arrived at is that in the solid, as
well as in the liquid solution, the cation Tl$^+$ is the
carrier of luminescence.                               A. E. T.

Karpov Phys-Chem Inst, Moscow
Dept optics, Kiev State U.

ASM·SLA  METALLURGICAL LITERATURE CLASSIFICATION

535.372                                           2423

Light yield of phosphorescence of aqueous solutions of Tl+ salts. KONDILENKO, I. I., AND SHISH-LOVSKY, A. A. *C.R. Acad. Sci. URSS*, 35, 8, *pp.* 236-240, 1942.—Describes spectral investigations, incl. the ultra-violet part of the emission spectrum, and measurements of the abs. value of the light yield for the emission spectrum as a whole. Solutions studied were a pure aq. solution of TlCl and a mixed aq. alkaline halold solution of TlCl + KCl. The measurements of the abs. energy yield were based on comparative measurements of the energy yield for the solution investigated and that for fluorosceine solution, for which the yield is known. The quantum yield was calculated from the abs. energy yield. The results obtained are set out in a table which shows how the light yield (energy and quantum) is influenced by the conc. of free Cl-ions in solution.          A. B. T.

3

Emission of spectrally diffuse bands by solutions of Ce salts.  A. A. Shishlovskii.  *J. Exptl. Theoret. Phys.* (U.S.S.R.) 13, Nos. 7-8, 284-8(1943). – The absorption spectra of aq. solns. of the halides, sulfate, and nitrate of Ce⁺⁺⁺ were studied.  The mechanism of the photo-luminescence involves the ion Ce⁺⁺⁺ and its shell 4 f, but not any complex products that may be formed.  Ce and La salts show nearly the same absorption spectra, consisting of 4 diffuse bands.  The spectra of the cryst. salts and those of concd. solns. in water or in borate or phosphate solns. are very similar.  The photoluminescence spectra are very stable as compared to those for Tl, Pb,

F. H. Rathmann

ASM SLA    METALLURGICAL LITERATURE CLASSIFICATION

**Photoluminescence of heavy metal ions in liquid and solid solutions.** A. A. Shishlovskii (Kiev Univ.). *Bull. acad. sci. U.R.S.S., Sér. phys.* 9, 351-3(1945). Ions can form in solns. luminescent centers. Mols. of the solvents can combine with these ions to complexes which sometimes stabilize and sometimes dissipate the emission properties of the ions. 11 references. — S. Pakswer

A S M - S L A   METALLURGICAL LITERATURE CLASSIFICATION

*C A*

**Absorption spectra of chlorine salts of thallium and lead in aqueous solution.** A. A. Shishlovskiĭ, I. I. Kondilenko, and M. U. Belyĭ (Kiev Univ.). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 12, 541–7(1948).—It has been stated previously (Kondilenko and Shishlovskiĭ, *C.A.* 37, 1931¹) that photoluminescence of aq. solns. contg. TlCl is due to Tl⁺ and that its bond with Cl⁻ has electrostatic character. No relation between the intensity of radiation and the concn. of Cl could be observed. Absorption measurements were made on $2 \times 10^{-4}$ *M* TlCl with progressive addn. of KCl. With increasing concn. of Cl⁻ the absorption is also shifted towards longer wave lengths. Hydrated Pb⁺⁺ does not luminesce; luminescence occurs when Cl⁻ is added and the intensity is proportional to the Cl⁻ at low concns., indicating the formation of PbCl⁺ and neutral PbCl₂. Absorption measurements were made on PbCl₂ and Pb(ClO₃)₂ solns. and, with addn. of KCl or MgCl₂, increase of Pb⁺⁺ in solns. with excess Cl⁻ does not modify the absorption spectra but increase of Cl⁻ shifts the curves towards longer wave lengths. The results can be interpreted as follows: the short-wave band ( ~200 mμ) is due to electronic transitions of Pb⁺⁺; the long-wave band (~ 230–270 mμ) is due to transitions in the PbCl⁺ mol. Increase of Cl⁻ forms an ionic envelope around the PbCl⁺ mol. and thus causes the displacement of the spectrum.

S. Pakswer

SHISHLOVSKIY, A.A.    Shishlovskii, A.A.

SHISHLOVSKIY, AA.

2. The absorption spectra for aqueous solutions of the halide salts of thallium(I) and lead(II). M. U. Belyi, I. I. Kondilenko, and A. A. Shishlovsku (State Univ., Kiev). *Pamyati Sergeya Ivanovicha Vavilova, Akad. Nauk S.S.S.R.* 1952, 247–68.—The absorption spectra was studied photographically for aq. solns. of the halide of $Tl^+$ and $Pb^{++}$. The absorption of the anion was accounted for by means of a comparison spectrum of the solvent contg. an equiv. concn. of the anion usually in the form of the K salt. The concn. of the solns. was varied from satd. to very dil. A comparison of the spectra leads to the conclusion that the spectra are due to electronically excited states of the cations. Assocn. processes were also observed leading to the formation of the ions: $TlBr_3^=$, $PbCl^+$, $PbBr^+$, and $PbI^+$.    J. R. L.

SHISHLOVSKIY, A A

USSR.

535.514.2

10701.    Calculations concerning, and investigation of, a polarizer for the infrared; M. I. LISITSA AND A. A. SHISHLOVSKIJ. *Izv. Akad. Nauk SSSR, Ser. Fiz.*, 17, No. 5, 660-8 (1953) *In Russian.*

Formulae are worked out for the degree of polarization $P$ of light passed by a pile of plates, making allowance for absorption in the plates, and interference in the thin layers of air between them. With proper dimensioning of the polarizer (thickness of the plates and of the air space between them) these two effects can increase the value of $P$, and i.r. light, incident at the Brewster angle on a pair of selenium plates, should come out 99·5% polarized: which is approximately confirmed by experiment. The formulae deduced are found to reproduce experimental results, e.g. for the variation of $P$ with the angle of incidence, satisfactorily. A diagram of the arrangement for investigation of the polarization of i.r. light by a pile of selenium plates is shown. R. C. MURRAY

Kiev State U.

SHISHLOVSKIY, A.A.

5008

## USSR.

535.321 : 535.417

13011. Spectrointerferometric differential method for measuring the refractive index and dispersion of liquids. D. V. CHEPUR AND A. A. SHISHLOVSKII. *Izv. Akad. Nauk SSSR, Ser. Fiz.,* 17, No. 6, 761-4 (1953) *In Russian.*

This is an improvement on Obreimov's (1945) method for determining refractive indices of liquids interferometrically. The construction of a special cuvette for containing the test and reference liquids, the measurement of the thickness of the liquid-containing spaces in the cuvette, using two liquids of known refractive index, the method of determining the absolute value of the order of the interference bands by rotation of the cuvette through a small, accurately measured angle (so as to change the optical thickness of liquid traversed) and finally the method of measuring the refractive index interferometrically to within a few units in the sixth place, are described.

R. C. MURRAY

SHISHLOVSKIY, Aleksandr Andreyevich

Academic degree of Doctor of Physico-mathematical Sciences, based
on his defense, 13 December 1954, in the Council of the Kiev State
U imeni Shevchenko, of his dissertation entitled: "Optical research
of luminescent solutions of electrolytes" and Academic title of
Professor. Chair: "Optics."

Academic degree and/or title: Doctor of Sciences and Professor

SO:  Decisions of VAK, list no. 17, 9 Jul 55, Byulleten' MVO SSR, No. 17,
     Sept 56, Moscow, pp 9-16, Uncl.   JPRS/NY-435

USSR/Chemistry - Analytical chemistry

Card   1/1      Pub. 43 - 94/97

Authors     :   Shishlovskiy, A. A.

Title       :   Microspectroabsorption investigation of Tl and Pb halides

Periodical  :   Izv. AN SSSR. Ser. fiz. 18/2, page 298, Mar-Apr 1954

Abstract    :   Brief summary is presented of the results obtained during microspectro-
                absorption analysis of thallium and lead halides.  The special arrange-
                ment constructed for this investigation is described.  The three types
                of absorption centers discovered in the halides are explained.  One USSR
                reference (1952).

Institution :   The T. G. Shevchenko State University, Kiev

Submitted   :   ......

USSR/ Chemistry – Spectral analysis

Card 1/1     Pub. 43 – 95/97

Authors     : Byelyy, M. U., and Shishlovskiy, A. A.

Title     : Absorption spectra of alkaline solutions of Tl and Pb salts

Periodical : Izv. AN SSSR. Ser. fiz. 18/2. 298–299, Mar–Apr 1954

Abstract     : Data are presented regarding the absorption spectra, ion bonds, covalence and chemical associates of alkaline solutions of thallium and lead salts as established through spectral analysis.

Institution : The T. G. Shevchenko State University, Kiev

Submitted     : ......

SHISHLOVSKIY, A.A.

USSR/Physics

Card 1/1       Pub. 43 - 17/62

Authors     : Gorban', I. S., and Shishlovskiy, A. A.

Title       : Anomalous light dispersion in solutions of complex organic compounds

Periodical  : Izv. AN SSSR. Ser. fiz. 18/6, 676-677, Nov-Dec 1954

Abstract    : The light dispersion in solutions of fluoresсein, iodo-eosin, fuchsin,
              cyanine, rhodamine B, etc., was investigated by means of a combined spectro-
              meter/Rayleigh interferometer.  These organic compounds were chosen because
              of their known simple absorption bands in the visible zone of the spectrum.
              It was found, in contrast to vapors with lined absorption spectrum, that
              the dispersion curves of the investigated complex organic compound solutions
              have an asymmetry within the simple absorption bands and that the maximum
              of the absorption curve is much better expressed than the minimum.  One
              USSR reference (1953).  Graph.

Institution : The T. G. Shevchenko State University, Physics Faculty, Kiev

Submitted   : .....

SHISHLOVSKIY, A.A.

USSR/Physics – Analysis methods

Card 1/1          Pub. 43 – 18/62

Authors     :   Shishlovskiy, A. A.

Title       :   The method of concentrational optical functions as a phys-chem. analysis method at reversible chem. reactions

Periodical  :   Izv. AN SSSR. Ser. fiz. 18/6, 677-678, Nov-Dec 1954

Abstract    :   It is shown experimentally that the method of concentrational optical functions is well applicable in such cases where the optical characteristics analyzed remain qualitatively unchanged, since they change only quantitatively.  Examples are also cited showing that this optical function method can also be successfully applied during photochemical reversible reactions and in cases where the equilibrium of a given system is disturbed by the change in temperature of the solution.  One USSR group reference (1940-1952).

Institution :   The T. G. Shevchenko State University, Physics Faculty, Kiev

Submitted   :   .....

SHISHLOVSKIY,

USSR/ Physics

Card        : 1/1

Authors     : Kundzich, G. A. and Shishlovskiy

Title       : Vavilov's law on constancy of quantum outputs of the photo-luminescence
              of vapors of organic substances.

Periodical  : Dokl. AN SSSR, 97, Ed. 3, 429 - 432, July, 1954

Abstract    : Describes experimental work performed on various vapors of organic subst-
              ances in order to find out whether Vavilov's law on constancy of output
              quanta of photo-luminescence of various organic solutions is applicable
              to vapros of organic substances or not. Diagrams and a table show re-
              sults of the experiments. Nine references.

Institution : Kiev State University, im. T. G. Shevchenko

Presented by : Terenin, Academician, March 31, 1954

SHISHLOVSKIY, O.A.

Category: USSR                                                          B-11

Abs Jour:   Zh--Kh, No 3, 1957, 7643

Author   :   Shishlovskiy, O. A.
Inst     :   Kiev University
Title    :   On the Utilization of Optical Concentration Functions in the
             Structural Analysis of Electrolytic Solutions

Orig Pub:   Nauk. Zap. Kievs'k. Un-t, 1955, Vol 13, No 7, 63-79 (published
            in Ukranian with a Russian summary)

Abstract:   A method is proposed for the optical determination of the stoichio-
            metric composition of the simplest chemical compounds formed
            in reversible reactions.  The method is based on the analysis of the
            functional dependence of the optical properties of the solution on the
            concentration of the structure-forming elements of the solution; the
            dependence must be linear.  Experimental data obtained from lumines-
            cence, absorption spectra, and refraction measurements for solutions

Card     :   1/2                              -3-

Category:  USSR                                                        B-11

Abs Jour:   Zh--Kh, No 3, 1957, 7643

of Tl and Pb halide salts are evaluated.  It is shown that association
of various types occurs in mixed Tl bromide and chloride solutions
containing an excess of $Cl^-$, $F^-$, and $OH^-$ ions; when an excess of
$Br^-$ ions is present, association of the type $TlBr_2^-$ has been defin-
itely established.  In the case of aqueous dilute solutions of Pb
halide salts, the cation is hydrated; in the presence of $Cl^-$, structures
of the type PbCl are formed.  In alkaline solutions of Pb containing
an excess of $OH^-$, the formation of associates of constant stoichiome-
tric composition has been noted.

Card     :   2/2                              -4-

USSR/Physical Chemistry - Molecule. Chemical Bond, B-4

Abst Journal:  Referat Zhur - Khimiya, No 19, 1956, 60765

Abstract:   optical centers of these salts are the cathions.  In solution the
            cathions yield practically no bonds of homeopolar nature with other
            ions and thus differ substantailly from cathions of heavy metals.
            Proximate order around the cathions plays a certain role in these
            instances also but it does not determine the position and nature of
            the spectra of the given ions.  Measurements of quantum yield,
            phosphoroscopic observations, investigation of the nature of
            elemental emitter according to wide-angle interference, lead the
            author to the conclusion that in all of the investigated instances
            there takes place a dipole radiation of cathions caused by per-
            missible transitions of electrons from the external electron shell
            5d to the inner, well protected electron shell 4f.  Structure in
            the spectra, which notwithstanding their diffuse nature can still
            be detected, is in good agreement with that which is to be ex-
            pected in view of the theory.

Card 2/2

USSR/Optics                                                          K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10430


            log k changes from 3.98 to 3.88 (k is the absorption coefficient).
            When the solvent is diluted with water, the band changes gradually
            into the absorption spectrum of the hydrated $Pb^{2+}$ ion.  The absorp-
            tion band of the alkali associate of $Pb^{2+}$ in a glycerine solution
            and of the chlorine and bromine associates in 50% aqueous solution
            of glycerine shifts towards the longer waves and broadens.  The
            absorption spectra of chlorine, bromine, and alkali solutions of
            lead were investigated at temperature from 20 to $98^{\circ}$ and from -2.5
            to $-14^{\circ}$.  For chlorine and bromine solutions of lead, there is a
            lowering and broadening of the band with increasing temperature,
            and a narrowing and rising of the band with decreasing temperature.
            The spectra of the alkali solutions change little with changing
            temperature.  It is concluded that aqueous solutions of the salts
            Pb $(ClO_4)_2$  contain hydrated ions $ClO_4$ and $Pb^+$.  The formations
            of the associates (Terenin A.N., Uspekhi fiz. nauk, 1937, 17, No 1)
            and transfer of energy does not take place.  The shift of the max-


Card     : 2/3

USSR/Optics

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10430

imum of absorption upon change of solvent is explained by the elec-
trostatic action of the molecules of the solvent on the $Pb^{2+}$ ion.
From the data of the temperature measurements it is concluded that
the weak associates of $Pb^{2+}$ with the anions Cl , Br , and OH are
not strong, and a role is played in their formation by the ions of
the nearest order and partially of the farther order around the ion
$Pb^{2+}$. It is concluded that the change in the absorption with chan-
ging temperature is not the result of the smearing of the energy
levels, but of the weakening of the bond between the ions of the
associates. The strongest associates are formed in alkali solutions,
next in low-concentrated solutions, and then in strongly concentrated
halide solutions of lead. This is confirmed by the presence of lu-
minescence in chlorine solutions of lead.

Card    : 3/3

USSR/Optics - Physical Optics, K-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35791

Author: Lisitsa, M. P., Shishlovskiy, A. A.

Institution: None

Title: The Calculation, Preparation and Investigation of a Polarization Pile

Original
Periodical: Nauch. zap. Kiivs'k. un-t, 1955, 14, No 8, 141-157

Abstract: A theory is given for a multilayer polarizer consisting of any number (m) different non-absorbing thick plane-parallel layers. A separate analysis given for the case of identical absorbing layers. Equations are obtained for the intensities of the light beams, reflected or transmitted through the multilayer pile, and equations are given permitting calculation of the degree of polarization $(P_{d_m})$ in the absence of absorption, using a glass pile as an example. Its suitability is shown for all the working range of angles $\varphi$. The following results are obtained:

Card 1/2

FD-3209

USSR/Physics - Spectral Analysis of Liquids

Card 1/1        Pub. 153-18/28

Authors     :  Gorban' I. S. and Shishlovskiy A. A.

Title       :  Two simple spectro-interference methods for studying dispersion in the
               visible and ultraviolet spectral bands

Periodical  :  Zhur. Tekh. Fiz., 25, No 7, 1297-1306, 1955

Abstract    :  The first method uses Fresnel diffraction on the boundary of two transparent
               media.  The other possibility consists in measuring of dispersion curves of
               liquids and solutions without previous knowledge of their refractive index.
               An assembled Rayleigh type interference meter was used.  It is also possible
               to study this way the anomalous dispersion of light in solutions.  Five ref-
               erences.

Institution:  --

Submitted   :  July 4, 1954

*SHISHLOVSKIY, O.A.*

KUNDZICH, G.O. [Kundzich, H.O.]; SHISHLOVSKIY, O.A. [Shyshlovs'kyi, O.A.]

Temperature dependence of photoluminescence of vapors of polyatomic organic compounds. Nauk povid. KDU no.1:19-20 '56.    (MIRA 11:4)
(Luminescence)

SHISHLOVSKIY, O.A.

LISITSA, M.P. [Lysytsia, M.P.]; SHISHLOVSKIY, O.A. [Shyshlovs'kyi, O.A.]

Spectrophotometric method for determining the polarization degree
of alloys. Nauk povid. KDU no.1:21  '56.                    (MIRA 11:4)
                    (Alloys--Spectra)
                    (Polarization (Light))

SHISLOVSKIY, A.A.

Anomalous dispersion of light in the simplest solutions of inorganic compounds. I. S. Gorban and A. A. Shislovskii. Soviet Phys. "Doklady" 1, 249-51 (1956)(English translation).—See C.A. 51, 4824d.

B. M. R.

SHISHLOVSKIY, A.A.

Comparison of the absorption spectra of dehydrated microcrystals
of thallium and lead halide salts and of alkali halid phosphors
activated by the salts of the above metals.  Opt. i spektr. 1 no.
6:765-771 O '56.                                              (MLRA 9:12)

1. Kiyevskiy Gosudarstvennyy universitet imeni T.G. Shevchenko.
      (Lead halides--Spectra) (Thallium halides--Spectra)
              (Phosphors--Spectra)

GORBAN', I.S.; SHISHLOVSKIY, A.A.

Rayleigh-type mirror interferometer.  Opt. i spektr. 1 no.6:
811-812 O '56.                                            (MLRA 9:12)

1. Kiyevskiy Gosudarstvennyy universitet.
                    (Interferometer)

SHISHLOVS'KIY, O.A.

Spectrographical determination of carbon in steels. V. P. Golovchenko and O. A. Shishlovs'kii. (Nauk. Zapiski Kiev. Derzhav. Univ. im. T.G. Shevchenki 19, No. 9, Zbirnik Fis. Fak. No. 5, 5-11 (1950).—One can determine C starting with 0.01%, and in the region from 0.01 to 0.03% C the error is ±6%, and at higher C values ±2%. The change of the intensity of the lines due to C by the presence of Mn, Cr, Ni, V, Mo, W, and Si is tabulated. 13 references. — Werner Jacobson

Shishlovs'kyy, O.A.

B-4

USSR/Physical Chemistry - Molecule, Chemical Bond.

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3518.

Author : M.U. Bilyy, O.A. Shishlovs'kyy.
Inst   : Kiev University.
Title  : Absorption Spectra of Thallium and Lead Alkaline Solutions.

Orig Pub: Nauk, zap. Kyivs'k un-t, 1956, 15, No 5, 47-52.

Abstract: Data concerning the absorption by chloride, bromide, iodide and
         thiocyanate solutions of Pb are quoted in the paper. The energy
         structure of the Pb cation is showing itself in all above men-
         tioned cases. Consequently, the Pb ions belonging to the com-
         plex produce compounds, in which the individual behavior of these
         ions is preserved to a certain degree. The study of absorption
         by alkaline solutions of Pb salts showed that extraordinarily
         strong complexes originate in such solutions, and that the bond
         therein is near the homopolar one, which is indicated by the
         stability of the corresponding absorption band ( $\lambda$ (max.) =

Card    : 1/2                      -9-

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3518.

242 m$\mu$) at various OH ion concentrations within great margins.
A complex with a weak bond is produced in the case of alkaline
solutions of Tl salts. This is also visible from the behavior
of a certain absorption band ( $\lambda$ = 256 m$\mu$). The conclusions re-
garding the complex strength are confirmed by absorption measure-
ments of polyanion solutions of the type M + KOH + KHal, as well
as by the luminescence study of alkaline Pb and Tl solutions.

Card    : 2/2                      -10-

SHISHLOVS'KIY, O.A.

The curves of the absorption spectra of solutions of thallium and lead. M. U. [...] and O. A. Shishlov, Kii. *Nauk.* *Zapiski Kiiv. Derzhav. Univ. im. T. G. Shevchenka*, 15, No. 9, *Zbirnik Fiz. Fak.* No. 3, 47-62(1056).—The light absorption curves for $PbCl_2$, $PbBr_2$, $PbI_2$, and $Pb(CNS)_2$ was analyzed in soln. and it was found that a certain part thereof will be indicative for the energy state of the $Pb^{++}$. In solns. where Pb complexes are formed, some of the compounds arising will still show, to a certain degree, the individual behavior of $Pb^{++}$. If KOH is added to such Pb solns. in various concns., then extremely stable complexes are formed, the bonds in which are practically homopolar, to which bonds belongs a new absorption band with $\lambda_{max.} = 2420$ A., and the concn. of the $OH^-$ will become completely changed. In the case of Tl salts such complexes are formed, yet the bonds are not so strong, which can be seen from the shift of $\lambda_{max.}$ to 2560 A. The stability of complexes can, therefore, be detd. if one makes absorption measurements in solns. which contain several anions, of the type M + KOH + KX (x = halide), and also by a detn. of the luminescence properties of alk. solns. of Pb and Tl. Werner Jacobson

SHISHLOVS'KIY, O.A.

— A spectro-interferometric method of quantitative analysis
of solutions which contain two or three compounds.  I. S.
Gorban, S. M. Rizhova, and O. A. Shishlovs'kil.  Nauk
Zapiski Kiis. Derzhav. Univ. im. T. G. Shevchenka, 19, No. 9,
Zbirnik Fiz. Fak. No. 5, 61-6(1950).—A variant of the
quant. analysis of liquid mixts. is investigated, as of a
soln. of toluene or of 1 or 2 of the xylenes in $C_6H_6$, which is
based upon the dispersion of light.  In this variant one
need not measure $ns$ for certain wave lengths, but one
counts the no. of interference bands, which occur in a certain
portion of the spectrum.  The accuracy of detg. one com-
ponent in two- or three-component systems is good enough
for plant-control purposes.     — Werner Jacobson

SHISHLOVSKIY, A.A.

chem

148. ABSORPTION AND LUMINESCENCE OF FLUORIDE SOLUTIONS OF LEAD AND THALLIUM. M. U. Belyi and A. A. Shishlovskii (Shevchenko Kiev State Univ.). Izvest. Akad. Nauk S S.S.R. Ser. Fiz. 20, 574-6(1956) May. (In Russian)

Absorption properties of $Pb(ClO_4)_2$ + KF mixed solutions with changing concentrations of KF were studied. With small concentration of $F^-$ (up to 1.41 mol. $l^{-1}$) the absorption spectrum of $Pb^{1+}$ hydrate cation kept diminishing and slightly spreading; with increased $F^-$ content, the band position ($\lambda_{max} = 208.5$ m$\mu$) and its intensity remained constant until the fluoride ion concentration reached 4.1 mol. $l^{-1}$. The absorption spectrum began to grow reaching its maximum with the maximum concentration of fluorine ions. A glow of violet luminescence was observed in solutions activated by high concentrations of $F^-$ and a new complex $PbF^+$ was found. Fluorine solutions with Tl produced an opposite effect. With strong concentrations the luminescence of Tl was deactivated and the state of excitation was reduced, indicating the absence of stable complexes of Tl with $F^-$. (R.V.J.)

SHISHLOVSKIY, A.A.

SHISHLOVSKIY, A.A.

Anomalous dispersion of light in the simplest solutions of inorganic compounds. I. S. Gorban and A. A. Shishlovskiĭ (T. G. Shevchenko State Univ., Kiev). *Doklady Akad. Nauk S.S.S.R.* 108, 63-5(1956).—The forms of the dispersion curves were detd. in the absorption bands of solid "solns." in the case of the simplest types of absorption centers, i.e., the F centers in alkali-halide crystals and the Pb$^{++}$ ions in KBr which has been activated with PbCl$_2$. The method used has been described previously (*C.A.* 50, 680d). The exptl. data support Davydov's (*C.A.* 48, 5650c) theory.                                I. Roytar Leach

SHISHLOVSKIY, A. A.

Anomalous dispersion of light in dye solutions. I. S. Gorban and A. A. Shishlovskii (T. G. Shevchenko State Univ., Kiev). *Doklady Akad. Nauk S.S.S.R.* 108, 310–13 (1956); cf. *C.A.* 50, 7586a.—The dispersion curves were measured for iodoeosin, fluorescein, Rodamine B, and fuchsin in $H_2O$, EtOH, and $Me_2CO$. The results showed that the dispersion curves for dil. dye solns. are asym. and that the degree of asymmetry does not depend upon the nature of the solvent except in those cases where compd. formation occurs between the dye and the solvent mols. J. Royter Leach

*SHISHLOVSKIY, P.P.*

PRIKHOT'KO, A F

24(7)         p 3     PHASE I BOOK EXPLOITATION     SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1:
Molekulyarnaya spektroskopiya (Papers of the 10th All-Union
Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy)
[L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies
printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii. Ed.: Jazer, S.L.; Tech. Ed.: Saranyuk, T.V.;
Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased),
Neporent, B.S., Doctor of Physical and Mathematical Sciences,
Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences,
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Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K.,
Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S.,
Candidate of Physical and Mathematical Sciences, and Glauberman,
A. Ye., Candidate of Physical and Mathematical Sciences.

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Card 19/30

$3HishlovskiY, A.A.$

AUTHOR:    Lisitsa, M.P. and Shishlovskiy, A.A.          51-5-14/26

TITLE:    Polarisation of Light Reflected by a Pile (of Glass Plates)
          (Polyarizatsiya sveta, otrazhennogo stopoy)

PERIODICAL:    Optika i Spektroskopiya, 1957, Vol.2, No.5,
               pp.637-644 (USSR)

ABSTRACT:    The degree of polarisation of a pile of $m$ plane-parallel
             glass plates, each of a refractive index $n$ is given by:

$$P = \frac{a(n^2 - 1)^2 \sin^2\varphi \cos\varphi}{[(n^2\cos\varphi - a)^2 + (a - \cos\varphi)^2 n^2] a \cos\varphi + m(n^2\cos\varphi - a)^2(a - \cos\varphi)^2} \quad (4)$$

where $\varphi$ = the angle of incidence and $a = (n^2 - \sin^2\varphi)^{1/2}$
    A pile of plates is used since only about 7% of the incident
light is reflected by a single plate.  The incident beam is
usually divergent, so that only axial rays can be made to satis-
fy Brewster's condition for complete polarisation:

$$\sin\varphi = \frac{n}{\sqrt{n^2 + 1}}, \quad \cos\varphi = \frac{1}{\sqrt{n^2 + 1}}.$$

For the above reasons, it is of interest to find the depend-
ence of $P$ on $m$ and $n$.

Card 1/3

Polarisation of Light Reflected by a Pile (of Glass Plates).

Figs. 1 and 2 show dependence of P on φ for piles consisting
of 1 plate (I), 3 plates (II) and 10 plates (III). In Fig. 1,
n = 1.516 (glass); in Fig.2 n = 2.92 (a theoretical value).
These two figures show that an increase of m causes narrowing
of Δφ , the range of incident angles at which maxima of P
occur. Increase of the refractive index (n) makes this effect
of m on Δφ very pronounced. Fig.3 shows good agreement
between the experimental values (dashed curves) and the theor-
etical ones (continuous curves) for m = 1, 3 and 10, respect-
ively. The authors studied the way in which, in a single plate,
the incident ray is broken up by multiple reflections into sec-
ondary rays. The number of these secondary rays,k,depends on the
plate thickness, its length and the angle of incidence of the
original ray. The effect of k on polarisation P in a
single plate is shown in Figs. 4 and 5. Fig. 6 shows calculated
P = f(φ) curves for a five-layer pile of selenium (n = 2.42
in infrared); curve III is calculated from eq. (4) on p.637,
which includes the effect of all the secondary rays; other
curves (I – II, IV – VIII) take into account only selected
secondary rays. Fig. 7 shows dependence of polarised-light
intensity on φ for the same selenium pile; curve I includes
Card 2/3 the effect of all the secondary rays, II-V only some selected

GORBAN', I.S.; SHISHLOVSKIY, A.A.

Abnormal dispersion of light in dilute solutions. Fiz. sbor. no.3: 286-289 '57.                                                    (MIRA 11:8)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko.
                (Solution (Chemistry))   (Dispersion)

40151
S/058/62/000/007/032/068
A061/A101

·9.67.0

AUTHORS:     Zakharov, V. P., Shishlovs'kiy, O. A.

TITLE:       Supply of material into the discharge gap of d-c and a-c arcs

PERIODICAL:  Referativnyy zhurnal, Fizika, no. 7, 1962, 14, abstract 7G118
             ("Visnyk Kyïvs'k. un-tu", 1958, no. 1, ser. fiz. ta khimi¹, no. 1,
             129 - 131, Ukrainian;  Russian summary)

TEXT:        Atomic concentrations were measured in a-c and d-c arcs burning at
atmospheric pressure between carbon electrodes. The elements concerned (Na and
Li in concentrations of 8.5 and 21%, respectively) were introduced into one of
the electrodes in the form of a mixture of salts of these elements with graphite.
The atomic concentration in the discharge gas was determined by the method of
"Rozhdestvenskiy's hooks", obtained on Rozhdestvenskiy's ИТ-23 (IT-23) interfero-
meter crossed with the ИСП-67 (ISP-67) spectrograph. A comparison of the
supply of material into a-c and d-c arcs leads to the conclusion that the input
is proportional to the power of current consumed by the arc.

F. Ortenberg

[Abstracter's note:  Complete translation]

Card 1/1

SAVIN, G.N., otv.red.; FAYNERMAN, I.D., zam.otv.red.; GREBEN', I.I., red.;
ZHMUDSKIY, A.Z., prof., doktor tekhn.nauk, red.; SHISHLOVSKIY,
A.A., red.; AMELIN, A., red.; PATSALYUK, P., tekhn.red.

[New methods of inspection and flaw detection in the machinery
and instrument industries] Novye metody kontrolia i defekto-
skopii v mashinostroenii i priborostroenii. Kiev, Gos.izd-vo
tekhn.lit-ry USSR, 1958. 264 p.                    (MIRA 12:10)

1. Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy pro-
myshlennosti. Ukrainskoye respublikanskoye pravleniye. 2. Gos-
universitet im. Shevchenko, Kiyev (for Zhmudskiy, Shishlovskiy).
        (Machinery--Construction)   (Instruments--Construction)

ZAKHAROV, V.P.; SHISHLOVSKIY, O.A. [Shyshlovs'kyi, O.A.]

Determining the effect of the composition of the test on the
inflow of matter into the plasma of the direct current arc. Visnyk
Kyiv.un.no.2.Ser.fiz.ta khim. no.1:21-25 '59. (MIRA 14:8)
(Electric arc) (Plasma (Ionized gases))

SOV/48-23-9-5/57

24(7)

AUTHORS: Zakharov, V. P., Shishlovskiy, A. A.

TITLE: An Investigation of the Entry of a Substance Into the Arc Plasma. The Case of the Binary Mixtures of Na and Li

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 9, pp 1063-1064 (USSR)

ABSTRACT: In the present paper the concentration of the atoms in a direct-current arc at atmospheric pressure is investigated, and, at the same time, the influence exercised by experimental conditions upon the entry of substances is investigated. The IT-23 interferometer according to Rozhdestvenskiy and an ISP-67 spectrograph were used, and the mixtures of $NaCl$, $Na_2CO_3$ and $Li_2CO_3$ with carbon were investigated by means of this instrument. These mixtures were located in the hole of one of the carbon electrodes. The entry of atoms into the direct current arc was found to be 1.33 times (Na) and 1.41 times greater (Li) respectively than that into the alternating current arc. During the investigation of the reciprocal influencing by the elements on the entry of atoms in the case of a change of the concentration of one of the components, it was found that the content of Na atoms in the discharge gap does not depend on the Li-content in the test sample. There is propor-

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An Investigation of the Entry of a Substance Into the Arc Plasma. The Case of the Binary Mixtures of Na and Li

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tionality of the lithium content between discharge gap and test sample. An increase of the concentration of a component in the test sample causes a monotonic increase of the concentration in the discharge gap. Only within the range of 25-40% Na was a deviation from the above result observed. Because of the different diffusion coefficients of Na and Li in the case of an equal content of elements in the test sample, the concentration of the Na atoms in the discharge gap is higher than that of the Li atoms. Furthermore, the influence exercised by the melting temperature of the mixture upon the entry of Na and Li atoms is investigated, and it is found that, with an increase of the average melting temperature, the entry both of Na and of Li decreases. If bivalent Ca is used instead of monovalent Li in the test sample, the entry of Na is decreased two-fold. There are 3 figures and 2 Soviet references.

Card 2/2